



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

May 31, 2022

Leanna Bosarge
Director, Regulatory Affairs
Control Solutions, Inc.
5903 Genoa Red Bluff
Pasadena, TX 77507

Subject: Label Amendment – Voluntary Cancellation of Use on Drainage Ditches in
Arizona and California
Label Amendment – Registration Review Label Mitigation for Prodiamine
Product Name: Quali-Pro Prodiamine 4L
EPA Registration Number: 53883-379
Application Dates: December 27, 2017; April 29, 2022
Decision Numbers: 537077; 585051

Dear Leanna Bosarge:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

Also, the Agency, in accordance with FIFRA, as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Prodiamine Interim Decision, and has concluded that your submission is acceptable.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. Although the Cancellation Order published on November 15, 2018 (FRL-9984-05) declared that EPA has previously approved the label containing this use deletion, the amended label is being approved with this letter. As of May 15, 2020, you may only distribute or sell this product if it bears this new revised labeling, or previously approved labeling with the use on drainage ditches in California and Arizona removed, or subsequently approved labeling.

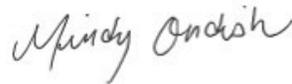
In accordance with 40 CFR 152.130(c), you may distribute or sell this product under previously approved labeling for 12 months from the date of this letter, if the label excludes use on drainage ditches in CA and AZ. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Endia Blunt by phone at 202-566-2505, or via email at blunt.endia@epa.gov.

Sincerely,



Mindy Ondish
Product Manager 23
Herbicide Branch
Registration Division (7505T)
Office of Pesticide Programs

Enclosure

Quali-Pro[®] Prodiamine 4L

Herbicide

A selective preemergence herbicide for control of grass and broadleaf weeds in established turfgrasses (excluding golf course putting greens), lawns and sod, nurseries, ornamentals, hardwood seedling nurseries, Christmas tree farms.

ACTIVE INGREDIENT:	% BY WT
Prodiamine*	40.8%
OTHER INGREDIENTS:	<u>59.2%</u>
TOTAL:	100.0%

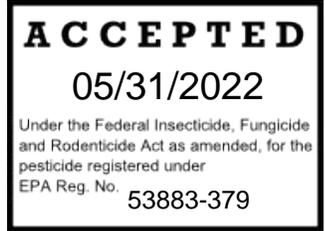
Contains 4 pounds prodiamine per gallon
 *CAS No. 29091-21-2



Manufactured For:
 Control Solutions, Inc.
 5903 Genoa Red Bluff
 Pasadena, TX 77507

EPA Reg. No: 53883-379
 EPA Est. No: _____
 Net Contents: _____

KEEP OUT OF REACH OF CHILDREN
CAUTION



FIRST AID	
IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious or convulsing person.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact SafetyCall [®] at (866) 897-8050 for emergency medical treatment information.	

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators, mixers, loaders, and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.607(d-e)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided with all of the PPE specified above for applicators and other handlers, and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- After handling this product immediately remove PPE, wash yourself thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations substantially above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment wash water.

NON-TARGET ORGANISM ADVISORY STATEMENT: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170.

This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements of this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forest or nurseries.

Keep unprotected persons out of treated area until sprays have dried.

WEED RESISTANCE MANAGEMENT

For resistance management, Quali-Pro Prodiamine 4L is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to Quali-Pro Prodiamine 4L and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of Quali-Pro Prodiamine 4L or other Group 3 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide used and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g. higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on

adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.

- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- Report any incidence of non-performance of this product against a particular weed species to Control Solutions, Inc., your local retailer or your local extension specialist. If resistance is suspected, treat weed escapes with a herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

BEST MANAGEMENT PRACTICES

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistant weeds. Scouting after herbicide application is important because it can facilitate the early identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant weed populations is to implement measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in reducing the spread of resistant weed seed.

PRODUCT INFORMATION

Formulation and Mode of Action

Quali-Pro® Prodiamine 4L is a liquid herbicide containing the active ingredient, prodiamine, a member of the dinitroaniline family of herbicides. Each gallon contains 4 pounds active ingredient. Quali-Pro Prodiamine 4L is used for pre-emergent control of grasses and broadleaf weeds. The active ingredient inhibits mitotic processes in plants and controls susceptible weeds by preventing growth and development of newly germinated weeds. Weed control is most effective when Quali-Pro Prodiamine 4L is activated by at least 0.5 inches of rainfall or irrigation or shallow incorporation (1 to 2 inches for non-turf applications) before weed seeds germinate and within 14 days following application.

Uses and Application

Apply Quali-Pro Prodiamine 4L for selective preemergence control of many grass and broadleaf weeds in the following areas: 1) established turfgrasses (excluding golf course putting greens); 2) lawns, and sod nurseries; 3) container, field-grown, and landscape ornamentals; 4) hardwood seedling nurseries; 5) established perennial and wildflower plantings; 6) non-crop areas including managed rights-of-way for transportation systems and utilities (such as roadways, roadsides, railways, and equipment yards); 7) non-crop facilities including substations, tank farms, pumping stations, parking and storage areas; 8) non-grazed fence rows; and 9) Christmas tree farms.

Apply Quali-Pro Prodiamine 4L in a minimum of 20 gallons/acre (0.5 gallons /1,000 sq ft) of carrier (water and or fluid fertilizer) using a calibrated, low-pressure sprayer with 50-mesh or coarser screens. A broadcast boom or handheld wand designed for herbicide or insecticide application will provide the

best results. Select nozzle pressure and gallonage to provide complete coverage.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

SPRAY DRIFT

Boomless Ground Applications: Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications: Take precautions to minimize spray drift.

New Plantings, Replanting and Rotational Plantings

Rotate nursery or landscape land areas treated with Quali-Pro Prodiamine 4L only to ornamental species listed on this label for 1 (one) year following application unless the following test has shown species safety:

- Before planting a species not listed on this label, sow several test strips of an indicator plant such as wheat, sorghum or corn into the treated area. If the indicator plants germinate and grow normally to a height of 12 inches with normal root development, it is safe to plant.

In areas disturbed by new plantings or replanting of labeled species, it may be necessary to retreat exposed soil to maintain satisfactory weed control, but do not apply more than 48 fl oz/acre per year.

MIXING QUALI-PRO PRODIAMINE 4L

When Used Alone

Mix Quali-Pro Prodiamine 4L thoroughly in the spray tank to ensure uniform application. Steps to follow when mixing Quali-Pro Prodiamine 4L include:

1. Filling the spray tank 1/4 full with clean water only;
2. Starting the agitation system and checking to ensure it is working properly;
3. Maintaining vigorous agitation in the spray tank before and during the application to ensure a well-mixed spray suspension;
4. Adding a spray colorant with Quali-Pro Prodiamine 4L to mark treated areas and improve application accuracy by minimizing swath skips and overlaps; and
5. After use, thoroughly clean the sprayer by flushing the system with water containing a detergent.

Refer to the **PESTICIDE DISPOSAL** section of this label for waste disposal. Do not allow spray suspension to dry in the tank. If Quali-Pro Prodiamine 4L was mixed with fertilizer instead of water in the spray tank, the fertilizer aids in re-suspension of Quali-Pro Prodiamine 4L if agitation is disrupted. However, use the entire tank before stopping agitation.

When Used in Tank Mixtures

Quali-Pro Prodiamine 4L can be applied in tank-mixtures with certain other EPA-registered herbicides to provide a broader spectrum of weed control and/or to control emerged weeds. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Tank mixes are permitted only in states where the tank-mix partner(s) are registered for the application site and the turf and ornamental species listed.

When mixing Quali-Pro Prodiamine 4L with other components (carrier and partner pesticide products), allow products to completely dissolve between steps and be sure to maintain agitation throughout mixing and application. When products are to be tank-mixed with Quali-Pro Prodiamine 4L, add them to the spray tank in the following order:

1. Products packaged in water-soluble bags. Agitate the tank mixture. Allow the water-soluble bags to completely dissolve and the products to disperse before adding any other tank-mix partners.
2. Water-dispersible granules (WDG or WG formulations) and wettable powders (WP formulations). Add wettable powders to the tank as agitation continues. Allow the product to disperse completely before other products are added.
3. Spray adjuvants and spray markers. Read the adjuvant's label first and use only those adjuvants approved for application to turf and ornamentals.
4. Quali-Pro Prodiamine 4L, other flowable liquids (FL) or suspension concentrates (SC) must be added next.
5. Add emulsifiable concentrates (EC) last.

Compatibility Testing

Before mixing Quali-Pro Prodiamine 4L with other pesticides in the spray tank, test for compatibility by mixing all components (carrier and pesticide products) in an appropriate container in proportionate quantities. For example, 1 quart would be 1/100 the volume of a 25 gallons/acre spray rate. At 1.0 pound/acre, the Quali-Pro Prodiamine 4L rate would be approximately 1 teaspoon to a quart of water (see **Table 1**).

Table 1. Amount of Component to Add to One Quart of Spray Carrier (Using Carrier Volume of 25 gallons/acre)

Component Formulations	Rate Per		Level Teaspoons
	Acre	1,000 sq ft	
Quali-Pro Prodiamine 4L	21.0 fl oz	0.5 fl oz	1.0
Dry Tank-Mix Partners	1.0 lb	0.4 oz	1.5
Liquid Tank-Mix Partners	16 fl oz	0.4 fl oz	0.5

If components do not ball-up or form flakes, sludge, gels, oily films, or layers, then the mixture is compatible. Let the mixture stand for 15 minutes. Incompatibility will usually occur within 5 minutes after mixing. If components are not compatible, use a compatibility agent and rerun the test to determine if the mixture is suitable. If the components are still not compatible, do not tank mix.

USE RESTRICTIONS

1. Do not graze or feed livestock forage cut from areas treated with Quali-Pro Prodiamine 4L.
2. Do not apply Quali-Pro Prodiamine 4L to plants that will be consumed for food use.
3. Follow all applicable directions, restrictions, and precautions on the labels of EPA-registered tank-mix partners.
4. Do not blend Quali-Pro Prodiamine 4L onto dry fertilizer or any other granular material.
5. **Chemigation:** Apply this product only through an overhead sprinkler irrigation system. Do not apply this product through any other type of irrigation system.
6. Do not apply aerially.
7. Do not apply to golf course putting greens
8. Follow all use direction in this label. In all cases, do not exceed a dosage of 1.5 pounds active/acre (48 fl oz/acre) per year on any use site.

WEEDS CONTROLLED IN ESTABLISHED TURF AND ORNAMENTALS

When used as directed in this label for established turf and container, field grown and landscape ornamental plantings including Christmas tree farms, Quali-Pro Prodiamine 4L will control the grass and broadleaf weeds listed in **Table 2**.

Table 2. Weeds Controlled by Quali-Pro Prodiamine 4L in Established Turf, Container, Field-grown and Landscape Ornamental Plantings Including Christmas Tree Farms

<u>Common Name</u>	<u>Scientific Name</u>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Betony, Florida	<i>Stachys flordans</i>
Bluegrass, Annual ¹	<i>Poa annua</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed, Common ²	<i>Stellaria media</i>
Chickweed, Mouseear (from seed)	<i>Cerastium vulgatum</i>
Crabgrass, Large ³	<i>Digitaria sanguinalis</i>
Crabgrass, Smooth ³	<i>Digitaria ischaemum</i>

Common Name**Scientific Name**

Crowfootgrass	<i>Dactyloctenium aegypticum</i>
Cupgrass, Woolly	<i>Eriochloa villosa</i>
Foxtails, Annual	<i>Setaria</i> spp.
Goosegrass ⁵	<i>Eleusine indica</i>
Henbit ²	<i>Lamium amplexicaule</i>
Itchgrass	<i>Rottboellia cochinchinensis</i>
Jew, Wandering ⁴	<i>Zebrian pendual</i>
Johnsongrass (from seed)	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colonum</i>
Knotweed ²	<i>Polygonum</i> spp.
Kochia	<i>Kochia scoparia</i>
Lambsquarters, Common	<i>Chenopodium album</i>
Lovegrass	<i>Eragrostis</i> spp.
Oxalis, Buttercup	<i>Oxalis pes-caprae</i>
Panicum, Texas	<i>Panicum texanum</i>
Panicum, Fall	<i>Panicum dichotomiflorum</i>
Panicum, Browntop	<i>Panicum fasciculatum</i>
Pigweed	<i>Amaranthus</i> spp.
Purslane, Common	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scabra</i>
Rescuegrass ⁴	<i>Bromus catharticus</i>
Shepherdspurse ²	<i>Capsella bursa-pastoris</i>
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>
Speedwell, Persian	<i>Veronica persica</i>
Sprangletop	<i>Leptochloa</i> spp.
Spurge, Prostrate	<i>Chamaesyce humistrata</i>
Vetch, Common	<i>Vicia sativa</i>
Witchgrass	<i>Panicum capillare</i>
Woodsorrel, Yellow (from seed)	<i>Oxalis stricta</i>

¹ In those areas where *Poa annua* is a winter annual, apply Quali-Pro Prodiamine 4L in August or September to established, non-overseeded turf before *Poa annua* seeds germinate (see **Table 4** for maximum use rates). These timings are approximate. Consult State Extension Service for more specific timing for your area. Also see the section of this label ***Poa annua* Control in Established Bermudagrass Overseeded with Perennial Ryegrass (AZ, CA, NV and TX Only)**.

² To control this weed, apply Quali-Pro Prodiamine 4L in late summer, fall, or winter before weeds germinate.

³ **Fall Applications for Spring Crabgrass Control in Cool-Season Grasses:** In those areas where the ground freezes in the winter, Quali-Pro Prodiamine 4L can be applied in the fall at rates of 21-24 fl oz/acre after soil temperatures fall below 50° F, but before the ground freezes. This application will control crabgrass the following spring.

⁴ Suppression only.

⁵ In many areas a single application of 21-48 fl oz/acre of Quali-Pro Prodiamine 4L will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, weed control will be most effective by making an initial application of 21-26 fl oz/acre followed by a second application 60-90 days later. **Note: Do not exceed** the maximum rate for the turf species listed in **Table 4 (Maximum Application Rate of Quali-Pro Prodiamine 4L per Calendar Year by Turf Species)**.

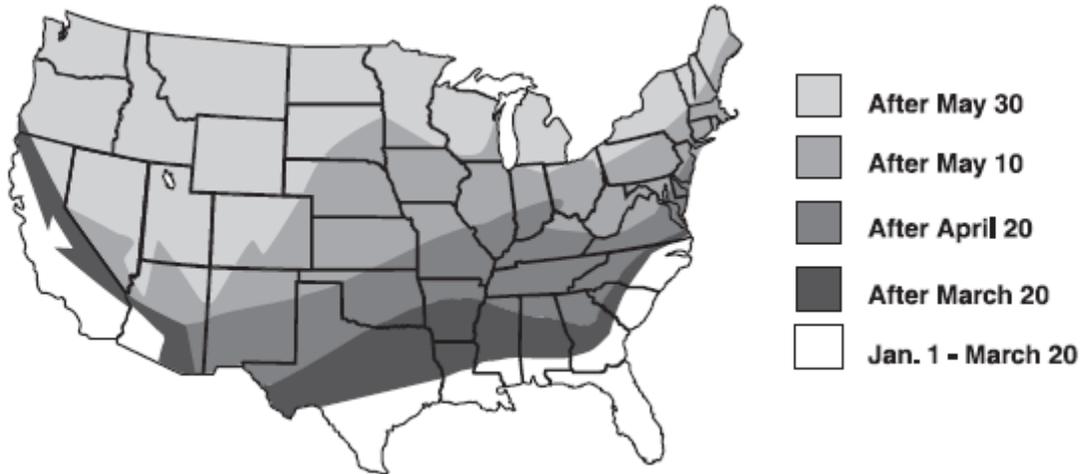
SPECIFIC USE DIRECTIONS - ESTABLISHED TURF

Product Information

Quali-Pro Proflam 4L is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turfgrasses including golf courses (excluding putting greens), lawns and sod nurseries. The maximum amount of Quali-Pro Proflam 4L that can be applied per year is given for each turfgrass species in **Table 4** of this label.

For optimum weed control, activate Quali-Pro Proflam 4L with at least 0.5 inches of rainfall or irrigation before weed seeds germinate and within 14 days following application. See the map below for approximate crabgrass seed germination dates.

Crabgrass Seed Germination Dates

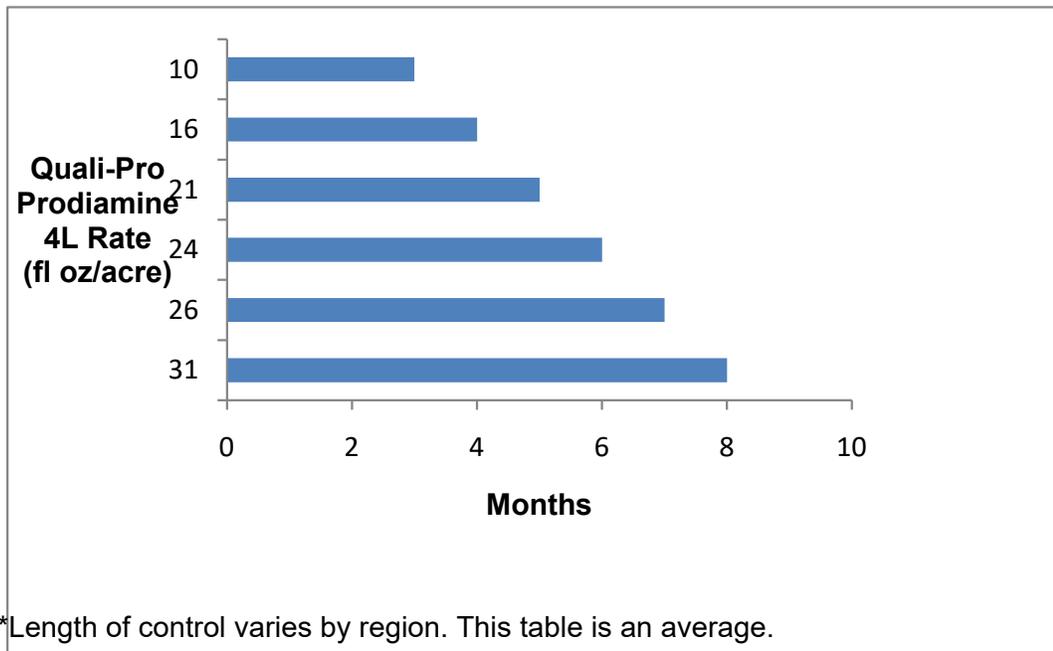


Timing and Method of Application to Turfgrass

Apply Quali-Pro Proflam 4L as a single application or in sequential applications to control weeds germinating throughout the year. All applications must be made before target weeds germinate because Quali-Pro Proflam 4L will not control weeds that have already emerged. Apply Quali-Pro Proflam 4L in a minimum of 20 gallons/acre (0.5 gallons/1,000 sq ft) of carrier (water and/or fluid fertilizer) using a calibrated, low-pressure sprayer with 50-mesh or coarser screens. A broadcast boom or handheld wand designed for herbicide or insecticide application will provide the best results. Select nozzle pressure and gallonage to provide complete coverage.

The amount of Quali-Pro Proflam 4L to apply depends upon the length of residual weed control desired (the higher the application rate, the longer the control), the turf species, and the maximum amount which can be applied to the turf species per calendar year. Specific information is provided in **Table 3** and **Table 4**.

Table 3. Length of Crabgrass Control* With Quali-Pro Prodiamine 4L



Dosage

Quali-Pro Prodiamine 4L can be safely applied to the turfgrass species listed in **Table 4**. Do not exceed the highest rate listed for each species in a calendar year as injury can occur.

Table 4. Maximum Application Rate of Quali-Pro Prodiamine 4L per Calendar Year by Turf Species

Turf Species	Fl oz Product/Acre ¹	Fl oz Product/1,000 sq ft ¹
Bermudagrass ² Bahagrass Centipedegrass Kikuyugrass Seashore Paspalum St. Augustinegrass ³ Tall Fescue (including turf-type) Zoysiagrass	21-48	0.5-1.1
Buffalograss Kentucky Bluegrass Perennial Ryegrass	10-30	0.23-0.70
Fine Fescue	10-24	0.23-0.55
Creeping Bentgrass (0.5 inch or more in height ⁴)	10-21	0.23-0.48

¹ Quali-Pro Prodiamine 4L can be applied more than once a year as long as the total amount applied is not greater than the maximum application rate for each turf species. All applications must be made before weed seeds germinate.

² Quali-Pro Prodiamine 4L can be used on newly sprigged or plugged bermudagrass at rates not to exceed 17 fl oz/acre (0.39 fl oz/1,000 sq ft). Newly sprigged or plugged bermudagrass stolon rooting can be temporarily inhibited.

³ Use an initial rate of 16-32 fl oz/acre per application.

⁴ To avoid grass injury, do not apply Quali-Pro Prodiamine 4L to creeping bentgrass mowed at less

than 0.5 inch in height.

When to Apply Quali-Pro Prodiamine 4L after Overseeding Turf

Injury to desirable seedlings is likely if Quali-Pro Prodiamine 4L is applied before the secondary roots of seedlings are in the second inch of soil, not thatch plus soil. To reduce the potential to injure overseeded turf, wait 60 days after seeding or until after the second mowing, whichever is longer, before applying Quali-Pro Prodiamine 4L.

When to Overseed After Application - All States

Quali-Pro Prodiamine 4L will inhibit the development of turfgrass species overseeded too soon after application. Follow rates and intervals in **Table 5** for best overseeding/reseeding results.

Table 5. Waiting Interval before Overseeding Perennial Ryegrass Following Application of Quali-Pro Prodiamine 4L

Amount of Quali-Pro Prodiamine 4L Fl Oz Product/Acre	Interval (Months Before Overseeding)*		
	North	Transition	South
16	4	4	4
21	5	4	4
24	6	5	5
26	---	6	6
31	---	7	7
36	---	---	9
42	---	---	10
48	---	---	12

* In AZ, CA, NV, and TX the overseeding interval can be shorter in established bermudagrass that has been overseeded with perennial ryegrass. See the next section for additional information.

Poa Annua Control in Established Bermudagrass Overseeded with Perennial Ryegrass (AZ, CA, NV, and TX only) Use on golf courses (excluding golf course putting greens), lawns, and sod nurseries when overseeding with perennial rye grass. (Minimum seeding rate of 350 lbs/acre).

Table 6. Amount of Quali-Pro Prodiamine 4L to Apply to Bermudagrass Overseeded with Perennial Ryegrass

Amount to Apply	When to Apply	Expected Control	Use Precautions
12-21 fl oz/acre*	6-8 weeks before ryegrass overseeding Second application: 4-8 weeks after overseeding or when perennial ryegrass roots are in the second inch of soil	1 application for 70% or greater control of <i>Poa annua</i> Second application can enhance control	<ul style="list-style-type: none"> • Some seedling mortality and temporary reduction in root growth of new seedlings can occur. • To reduce the potential for seedling mortality, maintain a moist seedbed with light, frequent irrigation. •

RESTRICTIONS

- Make no more than 2 applications per year for this use, and do not exceed a total of 27 fl oz/acre (0.85 pounds active/acre) per year.
- Do not make a second application if any injury to the ryegrass is observed after the first application.
- Do not make a second application unless the product was first applied before overseeding.

* The amount of Quali-Pro Prodiamine 4L to apply depends upon: the length of residual control desired (the higher the application rate, the longer the control). **Note:** The higher the rate, the greater the potential for seedling mortality.

Use Restrictions - Turfgrass: Golf Courses (excluding golf course putting greens), Lawns, and Sod Nurseries

1. Do not apply Quali-Pro Prodiamine 4L to areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (*Poa annua*) are desirable species.
2. Do not cut (harvest) treated sod before 90 days after application. To avoid turfgrass injury, do not apply to newly set sod until the sod has rooted and exposed edges have filled in.
3. ***Do not apply Quali-Pro Prodiamine 4L to golf course putting greens.***

Use Precautions - Turfgrass: Golf Courses (excluding golf course putting greens), Lawns, and Sod Nurseries

1. To avoid turfgrass injury, do not apply Quali-Pro Prodiamine 4L to turf stressed by conditions such as drought, low fertility, or pest damage.
2. Disturbing the herbicide barrier with cultural practices such as disking can result in reduced weed control.
3. If the depth of the creeping bentgrass root system becomes shallow and root tips contact prodiamine-treated soil, new root formation can be inhibited. Mowing height can affect the depth of a plants root system. To avoid this do not apply Quali-Pro Prodiamine 4L to creeping bentgrass less than 0.5 inches in height.

**CONTAINER, FIELD-GROWN AND LANDSCAPE ORNAMENTAL PLANTINGS
INCLUDING CHRISTMAS TREE FARMS**

Product Information

Apply Quali-Pro Prodiamine 4L to soil surfaces for preemergence control of many grass and broadleaf weeds around ornamental shrubs and trees, established perennial vegetation and wildflower plantings and Christmas tree farms. (See **Table 2** for a list of weeds controlled).

Timing and Method of Application

Quali-Pro Prodiamine 4L is a preemergence herbicide only and will not control emerged grass or broadleaf weeds. It works best when applied to soil that is free of clods, weeds and debris and is activated by at least 0.5 inches of irrigation or rainfall or shallow incorporation to a depth of 1 to 2 inches. Weed control is improved if Quali-Pro Prodiamine 4L is activated in the soil before weed seeds germinate and within 14 days after application. Apply Quali-Pro Prodiamine 4L to newly-transplanted and established ornamentals as a broadcast or over-the-top spray.

Crop Tolerance

Direct application of Quali-Pro Prodiamine 4L to rapidly growing tissue or buds can injure desirable plants. In the spring when buds are rapidly growing and expanding, over-the-top application of Quali-Pro Prodiamine 4L can injure new growth of desirable plants, however, these effects are temporary. To reduce the possibility of injury at this time, wait to apply Quali-Pro Prodiamine 4L over the top of newly emerged vegetation until it has hardened off, unless your experience indicates that the ornamental plant will not be injured by the over-the-top application. After application, immediately apply overhead irrigation to the foliage to wash Quali-Pro Prodiamine 4L from plant surfaces onto soil (watering the foliage of plants before application can improve the washing process).

Table 7. Amount of Quali-Pro Prodiamine 4L to Apply to Container, Field Grown and Landscape Ornamental Plantings and Christmas Trees Farms

Amount to Apply (Broadcast)*	When to Apply	Comments/Instructions
21-48 fl oz/acre or 0.5-1.1 fl oz/1,000 sq ft	In fall or spring before weeds germinate or after weeds are removed.	<ul style="list-style-type: none"> • Use the higher rate for longer control. • Quali-Pro Prodiamine 4L can be applied more than once per year as long as the total amount of product applied does not exceed 48 fl oz/acre (1.5 pounds active/acre) per year.

***NOTE:** For band application, calculate amount per acre:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast rate} = \text{amount to apply/acre of field}$$

Table 8. Equivalent Measurements for Quali-Pro Prodiamine 4L

Fl oz/Acre	Fl oz/1,000 sq ft	Approximate Equivalent -- Tablespoons/1,000 sq ft
21	0.5	1.0
31	0.7	1.5
42	1.0	2.0
48	1.1	2.25

Table 9. Application Sites and Instructions for Quali-Pro Prodiamine 4L Use on Container, Field Grown and Landscape Ornamental Plantings and Christmas Tree Farms

Site	Application Instructions
Newly-Transplanted Container or Field Nursery Stock	<ul style="list-style-type: none"> • Delay application until soil has settled around transplants. • Water transplants thoroughly before application. • Apply after cuttings form roots and are established. • To avoid inhibition of the tissue union, apply before budding/grafting or after buds/grafts have taken.
Established Container, Field Nursery Stock, or Landscape Plants	<ul style="list-style-type: none"> • Apply at any time as a broadcast, over-the-top, or directed spray.
Landscape (or Ornamental) Plantings	<ul style="list-style-type: none"> • Apply as a broadcast, over-the-top, or as a directed spray. • Delay applications to newly transplanted ornamentals until soil has settled around transplants.
Bare Ground Application for Container Placement	<ul style="list-style-type: none"> • Apply to soil (including mulch, gravel, wood chips, or other permeable base) upon which containerized ornamentals are placed. • After Quali-Pro Prodiamine 4L is applied, perform shallow cultivation or hand weeding only, to avoid disturbing the herbicide barrier.
In Shadehouses and Uncovered Polyhouses	<ul style="list-style-type: none"> • After Quali-Pro Prodiamine 4L is applied, uncovered polyhouses must remain open for at least 7 days and ornamentals must receive 2 irrigations totaling at least 0.5 inches of water before covering.

Site	Application Instructions
Ornamental Bulbs and Perennial Wildflower Plantings	<ul style="list-style-type: none"> • Quali-Pro Prodiamine 4L can be applied to bulbs or perennial wildflower species listed in Table 11. Tolerant Ornamental Species section. Apply before or after bulbs emerge but before bulbs bloom and weeds emerge. • In wildflowers, a postemergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.

Tank Mixtures for Use on Container, Field Grown and Landscape Ornamentals and Christmas Tree Farms

Tank mix Quali-Pro Prodiamine 4L with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with Quali-Pro Prodiamine 4L are for use only in states where the tank-mix partner(s), application site and intended use pattern are registered.

Follow the label directions of the tank-mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining a tank-mix partner in the spray tank, test for compatibility as described in the **Compatibility Testing** section of this label.

Table 10. Tank-Mix Partners for Quali-Pro Prodiamine 4L Use on Container, Field Grown and Landscape Ornamental Plantings and Christmas Tree Farms

Active Ingredient	Precautions/Instructions
Oryzalin, (use on conifers only)	<ul style="list-style-type: none"> • Mix with Quali-Pro Prodiamine 4L for postemergence control of certain broadleaf weeds including malva and filaree.
Isoxaben, Simazine, Metaolachlor	<ul style="list-style-type: none"> • See product labels for weed spectrum and tolerant ornamentals.
Glyphosate and Glufosinate-ammonium	<ul style="list-style-type: none"> • These nonselective tank mix herbicides control many emerged annual broadleaves and grasses. • Take extreme care to prevent tank mixtures with these partner products from contacting the foliage and stems of turfgrass, trees, shrubs, or other desirable vegetation because desirable vegetation could be severely injured or killed. Apply these tank mixtures as a directed spray and use a shield to prevent spray from contacting foliage of desirable plants. • Following instructions on the tank-mix partner's label, delay irrigation of the treated area to allow time for the herbicide to be absorbed by weed foliage.

Tolerant Ornamental Species

Quali-Pro Prodiamine 4L will not harm trees, shrubs, vines and flowers. The species listed below in **Table 11** are tolerant to Quali-Pro Prodiamine 4L. Quali-Pro Prodiamine 4L can be used for application to these species. Quali-Pro Prodiamine 4L can be applied over the top of the listed species. The species that are not tolerant to Quali-Pro Prodiamine 4L when grown in containers are indicated.

When plants are under stress (such as heat, drought, or frost damage), some cultivars of listed plants may be sensitive to Quali-Pro Prodiamine 4L.

Table 11. Tolerant Ornamental Species

<u>Scientific name</u>	<u>Common name</u>
<i>Abelia grandiflora</i> †	Abelia: Sherwood
<i>Abies</i> spp.	Fir species** (Balsam, Fraser, Noble, etc.)
<i>Acer palmatum</i>	Japanese Maple
<i>Acer platanoides</i>	Norway Maple
<i>Achillea</i> spp.†	Yarrow: King Edward
<i>Actinidia chinensis</i> *	Kiwi*
<i>Agapanthus africanus</i>	Lily-of-the-Nile (African Lily)
<i>Agapanthus orientalis</i> †	
<i>Akebia quintata</i> †	Five-Leaf or Chocolate Vine
<i>Allium cernuum</i> †	Lady's Leek, Nodding Onion
<i>Anemone hybrida</i> †	Japanese Anemone
<i>Aquilegia</i> spp. †	Columbine
<i>Arctostaphylos densiflora</i>	Vine Hill Manzanita
<i>Arctotheca calendula</i>	Cape Weed
<i>Aucuba japonica</i>	Japanese Aucuba
<i>Artemisia</i> spp. †	Wormwood; Silver Mound, Castle
<i>Aster</i> spp. †	Aster: Bonny Blue, Purple Dome
<i>Athyrium filix-femina</i> †	Lady Fern
<i>Begonia</i> spp. †	Fibrous Begonia: Hardy Grandis
<i>Berberis gladwynensis</i>	Barberry
<i>Berberis julianae</i>	Wintergreen Barberry
<i>Berberis mentorensis</i>	Mentor Barberry
<i>Berberis thunbergii</i>	Japanese Barberry
<i>Berberis verruculosa</i>	Warty Barberry
<i>Bergenia cordifolia</i> †	
<i>Boltonia asteroides</i> †	Snowbank
<i>Bougainvillea</i> spp. †	Bougainvillea
<i>Buddleia davidii</i> †	Butterfly-Bush (Dwarf Blue); Royal Red
<i>Buxus microphylla</i>	Japanese Boxwood
<i>Callistemon citrinus</i> †	Crimson Bottlebrush
<i>Callistemon viminalis</i>	Weeping Bottlebrush
<i>Calluna vulgaris</i>	Scotch Heather
<i>Campanula carpatica</i> †	Tussock Bellflower; (White Clips)
<i>Campis X tagliabuana</i> †	Trumpet Creeper, Trumpet Flower; Madame Galen
<i>Carpobrotus edulis</i>	Hottentot Fig (Ice Plant)
<i>Cassia artemisioides</i>	Feathery Cassia
<i>Ceanothus rigidus</i>	Wild Lilac
<i>Ceratostigma plumbaginoides</i> †	
<i>Chamaecyparis pisifera</i>	False Cypress
<i>Chrysanthemum nipponicum</i> †	
<i>Cleyera japonica</i>	Cleyera
<i>Citrus</i> spp.*	Citrus species*
<i>Coreopsis</i> spp. †	Coreopsis (Calliopsis): Early Sunrise, Moonbeam
<i>Cornus florida</i>	Dogwood (Flowering & American)
<i>Cornus stolonifera</i>	American Dogwood
<i>Cortaderia selloana</i>	Pampas Grass

Scientific name

Cotoneaster apiculatus
Cotoneaster buxifolius
Cotoneaster dammeri
Cotoneaster microphyllus
Crataegus spp.
Cupressus sempervirens
Crocosmia spp. †
Delosperma alba
Delphinium spp. †
Dianthus deltoidea †
Dianthus gratianopolitanus †
Dodonea viscosa
Echinacea purpurea †
Elaeagnus pungens
Euonymus fortunei
Euonymus japonica

Euonymus kiautschovicka
Fatsia japonica
Forsythia intermedia
Forsythia suspensa †
Forsythia viridissima
Gaillardia spp. †
Gardenia jasminoides
Gaura spp. †
Gentiana dahurica †
Geranium cinereum †
Gladiolus spp. **
Gypsophila repens †
Hedera helix
Helianthemum spp. †
Hemerocallis spp. †

Heucherella spp. †
Hibiscus **
Hibiscus Rosa-sinensis **
Hosta plantaginea †
Hosta sieboldiana †
Houttuynia cordata var. *variegata* †
Hydrangea macrophylla †
Ilex cornuta **
Ilex crenata
Ilex opaca
Ilex pernyi
Ilex vomitoria
Iris spp. **
Jasminium nudiflorum
Juglans spp. *
Juniperus chinensis
Juniperus conferta

Common name

Cranberry Cotoneaster
Cotoneaster
Bearberry Cotoneaster
Rockspray Cotoneaster
Hawthorne
Italian Cypress
Lucifer
Ice Plant
Larkspur; Blue Elf
Dianthus, Maiden Pinks 'Zing'
Cheddar Pink
Hop Bush
Coneflower, Purple; Magnus
Silverberry
Wintercreeper
Japanese Spindle Tree (Evergreen
Euonymus)
Spreading Euonymus
Japanese Aralia
Border Forsythia
Weeping Forsythia
Greenstem Forsythia
Gaillardia, Blanket Flower: 'Goblin'
Gardenia, Cape-Jasmine
Guara
Gentian
Cranesbill
Gladiolus species**
Baby's Breath
English Ivy
Sunrose
Daylily: Aztec Gold, Stella De Oro, Tender
Love
Coral Bell; Bridget Bloom
Rose of Sharon**
Chinese Hibiscus**
Hosta, Plantain Lily (Fragrant)
Hosta, 'Searsucker'

Bigleaf Hydrangea
Chinese Holly**
Japanese Holly
American Holly
Holly
Yaupon Holly
Iris species**
Winter Jasmine
Walnut*
Chinese Juniper
Shore Juniper

Scientific name

Juniperus davuricae†
Juniperus horizontalis
Justicia brandegeana
Lagerstromia indica
Lagerstromia indica and hybrids†
Lantana montevidensis†
Lavender spp. †
Leontopodium alpinum†
Ligustrum amurense
Ligustrum japonicum
Ligustrum lucidum
Ligustrum sinense†
Lilium spp. †
Liriope muscari
Liriope spicata†
Lobelia cardinalis†
Lonicera japonica
Lonicera tatarica
Loropetalum chinense†
Lythrum spp. †
Magnolia spp.**
Maleophora luteola
Malus spp.*
*Miscanthus sinensis***†
Nandina domestica
Narcissus spp.**
Nerium spp.
Oenothera missouriensis†
*Olea europaea**
*Ophiopogon japonicus***
Osmanthus heterophyllus†
Osteospermum fruticosum
Oxydendrum arboreum
Paeonia suffruticosa†
*Pennisetum setaceum***†
Perovskia atriplicifolia†
*Persea americana**
Photinia fraseri
Physostegia virginiana†
Picea spp. **

Pieris japonica

Pinus brutia
Pinus canariensis
Pinus elliottii
Pinus halepensis
Pinus nigra
Pinus palustris
Pinus radiata

Common name

Parsoni
Creeping Juniper
Shrimp Plant
Crape Myrtle
Crape Myrtle
Weeping Lantana
Lavender; Munstead
Edelweiss
Amur Privet
Japanese Privet
Glossy Privet (Wax-Leaf)
Chinese Privet
Lily
Liriope; Big Blue Lillyturf
Liriope, creeping
Cardinal Flower, Indian Pink
Japanese Honeysuckle
Tatarian Honeysuckle
Loropetalum; Burgundy
Loosestrife; Modern Pink
Magnolia species**
Ice Plant
Crabapple*
Yaku Jima**, Silberfeder**
Heavenly Bamboo
Narcissus species**
Oleander
Evening Primrose
Olive*
Mondo Grass**
Osmanthus (False Holly): Gulf Tide
Trailing African Daisy
Sourwood
Tree Peony
Fountain Grass (Dwarf)**

Avocado*
Frasier's Photinia (Redtip)
Dragonhead, False; Vivid
Spruce species** (Colorado Blue, Norway, etc.)
Japanese Andromeda; Lily-of-the-Valley Shrub
Calabrian Pine
Canary Island Pine
Slash Pine
Aleppo Pine
Austrian Black Pine
Longleaf Pine
Monterey Pine

Scientific name

Pinus strobus
Pinus sylvestris
Pinus taeda
Pinus thunbergiana
Pinus virginiana
Pistacia spp.*
Pittosporum rhombifolium
Pittosporum tobira
Podocarpus macrophyllus
Prunus laurocerasus
Prunus spp.*

*Pseudotsuga menziesii***
Pyracantha coccinea
Pyracantha fortuneana
Pyracantha koidzumii
Pyrus spp.
Quercus rubra
Quercus shumardii†
Raphiolepis indica
Raphiolepis umbellata
Rhododendron spp.†
Rosa banksiae
Rudbeckia spp. †
Rumohra adiantiformis
Santolina virens
Saxifraga spp. †
Scabiosa spp. †
Sedum album
Spiraea bumalda†
Syzygium paniculatum
Taxus cuspidata
Taxus media
Teucrium spp.†
Thalictrum dipterocarpum†
Thuja occidentalis
Trachelospermum asiaticum
Tsuga canadensis
Tulipa spp.
Veronica spp. †
Viburnum japonicum
Viburnum odoratissimum
Viburnum plicatum
Viburnum rigidum
Viburnum japonicum
Viburnum suspensum†
Viburnum tinus
Viburnum trilobium
Viburnum wrightii
Vinca major

Common name

Eastern White Pine
Scotch Pine
Loblolly Pine
Japanese Black Pine
Virginia Pine
Pistachio*
Queensland Pittosporum
Japanese Pittosporum
Japanese Yew
English Laurel
Almond, Apricot, Nectarine, Peach, Plum and Prune*
Douglas Fir**
Firethorn Scarlet
Firethorn
Firethorn
Pear spp. including Bradford
Oak species
Oak, Shumard's Red
Indian Hawthorne
Yedda Hawthorne
Rhododendrons, Azaleas
Lady Bank's Rose
Black-Eyed Susan: Goldstrum
Leatherleaf Fern

Saxifrage; Purple Dome
Pincushion Flower
Stonecrop
Spirea: Anthony Waterer
Japanese Boxcherry
Japanese Yew
Yew
Germander
Meadow Rue
American Arborvitae
Star Jasmine
Canada Hemlock
Tulip species
Veronica, Speedwell
Japanese Viburnum
Sweet Viburnum
Japanese Snowball
Canary Island Viburnum
Japanese viburnum
Arrowwood viburnum
Laurustinus
Cranberry Bush
Leatherleaf Viburnum
Vinca

Scientific name

Vinca minor

Vitis spp.*

Weigela florida

Yucca aloifolia

Yucca filamentosa

† Not for use in California

*Do not use on food producing trees, vines, or plants.

**Not for use on container grown plants.

Common name

Dwarf Periwinkle

Grape*

Old Fashioned Weigela

Spanish Bayonet

Yucca, Adam's Needle

Use Restrictions - Container, Field-grown and Landscape Ornamental Plantings and Christmas Tree Farms

- Do not exceed a dosage of Quali-Pro Prodiamine 4L of 1.5 pounds active/acre (48 fl oz/acre) per year on any site.

Use Precautions - Container, Field-grown and Landscape Ornamental Plantings and Christmas Tree Farms

- Disturbing the herbicide barrier with cultural practices such as disking, harrowing and deep raking can result in reduced weed control.

VEGETATION MANAGEMENT

Product Information

Apply Quali-Pro Prodiamine 4L to soil surfaces for preemergence control of many grass and broadleaf weeds in non-crop areas including ornamentals (does not include container or field grown ornamentals) and established perennial and wildflower plantings on or surrounding non-crop areas such as managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, and equipment yards) and facilities including substations, tank farms, pumping stations, parking and storage areas, and non-grazed fence rows. The best weed control occurs when the product is activated in the soil by 0.5 inch of irrigation or rainfall before weed seeds germinate and within 14 days after application.

Timing and Method of Application

Quali-Pro Prodiamine 4L is a preemergence herbicide only and will not control emerged grass or broadleaf weeds. It works best when applied to soil that is free of clods, weeds and debris and is activated by at least 0.5 inches of irrigation or rainfall or shallow incorporation to a depth of 1 to 2 inches. Weed control is improved if Quali-Pro Prodiamine 4L is activated in the soil before weed seeds germinate and within 14 days after application. Apply Quali-Pro Prodiamine 4L to newly-transplanted and established ornamentals as a broadcast or over-the-top spray.

Crop Tolerance

Direct application of Quali-Pro Prodiamine 4L to rapidly growing tissue or buds can injure desirable plants. In the spring when buds are rapidly growing and expanding, over-the-top application of Quali-Pro Prodiamine 4L can injure new growth of desirable plants, however, these effects are temporary. To reduce the possibility of injury at this time, wait to apply Quali-Pro Prodiamine 4L over the top of newly emerged vegetation until it has hardened off, unless your experience indicates that the ornamental plant will not be injured by the over-the-top application. After application, immediately apply overhead irrigation to the foliage to wash Quali-Pro Prodiamine 4L from plant surfaces onto soil (watering the foliage of plants before application can improve the washing process).

Table 12. Amount of Quali-Pro Prodiamine 4L to Apply in Vegetation Management

Amount to Apply (Broadcast)*	When to Apply	Comments/Instructions
21-48 fl oz/acre or 0.5-1.1 fl oz/1,000 sq ft	In fall or spring before weeds germinate or after weeds are removed.	Use the higher rate for longer control. Quali-Pro Prodiamine 4L can be applied more than once per year as long as the total amount of product applied does not exceed 48 fl oz/acre (1.5 pounds active/acre) per year.

*NOTE: For band application, calculate amount per acre:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast rate} = \text{amount to apply/acre of field}$$

Table 13. Equivalent Measurements for Quali-Pro Prodiamine 4L

Fl oz/Acre	Fl oz/1,000 sq ft	Approximate Equivalent - Tablespoons/1,000 sq ft
21	0.5	1.0
31	0.7	1.5
42	1.0	2.0
48	1.1	2.25

Table 14. Application Sites and Precautions for Quali-Pro Prodiamine 4L Used in Vegetation Management

Site	Application Precautions
Ornamental Trees, Shrubs, Vines	<ul style="list-style-type: none"> Apply as a broadcast spray, over-the-top, or as a directed spray. Delay applications to newly transplanted ornamentals until soil has settled around transplants.
Ornamental Bulbs and Perennial Wildflower Plantings	<ul style="list-style-type: none"> Quali-Pro Prodiamine 4L can be applied to bulbs or perennial wildflower species listed in the Tolerant Ornamental Species section (Table 11). Apply before or after bulbs emerge but before bulbs bloom and weeds emerge. In wildflowers, a postemergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.

Tank Mixtures for Use in Vegetation Management

Tank mix Quali-Pro Prodiamine 4L with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with Quali-Pro Prodiamine 4L are for use only in states where the tank-mix partner(s), application site and intended use pattern are registered.

Follow the label directions of the tank-mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining a tank-mix partner in the spray tank, test for compatibility as described on this label.

Table 15. Tank-Mix Partners for Quali-Pro Prodiamine 4L Use in Vegetation Management

Product	Precautions/Instructions
Oryzalin (use on conifers only)	<ul style="list-style-type: none"> Mix with Quali-Pro Prodiamine 4L for postemergence control of certain broadleaf weeds including malva and filaree.
Isoxaben, Simazine, Metolachlor	<ul style="list-style-type: none"> See product labels for weed spectrum and tolerant ornamentals.
Glyphosate and Glufosinate-ammonium	<ul style="list-style-type: none"> These nonselective tank mix herbicides control many emerged annual broadleaves and grasses. Take extreme care to prevent tank mixtures with these partner products from contacting the foliage and stems of turfgrass, trees, shrubs, or other desirable vegetation because desirable vegetation might be severely injured or killed. Apply these tank mixtures as a directed spray and use a shield to prevent spray from contacting foliage of desirable plants. Following instructions on the tank-mix partner's label, delay irrigation of the treated area to allow time for the herbicide to be absorbed by weed foliage.

Tolerant Ornamental Species - Vegetation Management

Quali-Pro Prodiamine 4L will not harm trees, shrubs, vines and flowers. The species listed above in **Table 11** are tolerant to Quali-Pro Prodiamine 4L. Quali-Pro Prodiamine 4L can be used for application to these species. Quali-Pro Prodiamine 4L can be applied over the top of the listed species.

When plants are under stress (such as heat, drought, or frost damage), some cultivars of listed plants may be sensitive to Quali-Pro Prodiamine 4L.

**VEGETATION MANAGEMENT - HARDWOOD SEEDLING NURSERIES
(NON-ORNAMENTAL, FORESTRY USE ONLY)**

Product Information

Quali-Pro Prodiamine 4L provides residual preemergence weed control in conifer and hardwood seeding nurseries. The best weed control occurs when the product is activated in the soil by 0.5 inches of irrigation or rainfall before weed seeds germinate and within 14 days after application. Apply Quali-Pro Prodiamine 4L to conifer and hardwood seeding nurseries any time after the soil has settled around newly transplanted seedlings and liners.

Table 16. Amount of Quali-Pro Prodiamine 4L to Apply to Hardwood Seedling Nurseries

Site	Application Rate	Timing	Comments/Instructions
Hardwood Seedling Nurseries	21 - 48 fl oz/acre or 0.5 –1.1 fl oz/1,000 sq ft	Apply in fall or spring before weed seeds germinate or after weeds are removed	Use higher rate range for longer control. More than one application per year is permitted, but do not apply more than 48 fl oz/acre (1.5 pounds active/acre) per year.
Southern Pine Seedbeds	15.5 fl oz/acre or 3.5 fl oz/1,000 sq ft	Just after seeding and/or a minimum of 3 weeks after most seedlings have shed their seedcoat.	To assist in the establishment of Southern pine seedbeds, apply this product preemergence just after seeding pines. Application after emergence of pine seedlings must not occur until 3 weeks after most seedlings have shed their seedcoat. Mix this product with clean water and broadcast spray at 20 to 40 psi

			in a minimum of 20 gallons of water per treated acre. After application, sprinkler irrigate beds with approximately 0.5 inches of water.
Hardwood Seedbeds: Oak (<i>Quercus</i> spp.), Sweetgum, Green Ash	15.5-31 fl oz/acre or 0.35-0.70 fl oz/1,000 sq ft	When seedlings are at least 6 weeks old (from time of 50% germination)	Use higher rate for longer control and when higher weed pressure is anticipated. The lower rate will provide 2 to 3 months of weed control. Broadcast to beds and apply approximately 0.5 inches of sprinkler irrigation afterwards.

Tank Mixtures for Use in Hardwood Seedling Nurseries

Tank mix Quali-Pro Prodiamine 4L with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with Quali-Pro Prodiamine 4L are for use only in states where the tank-mix partner(s), application site and intended use pattern are registered.

Follow the label directions of the tank-mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining a tank-mix partner in the spray tank, test for compatibility as described on this label. See the **Compatibility Test** section.

For Conifer Seedling Nurseries, tank mix Quali-Pro Prodiamine 4L only with oryzalin containing herbicides (for use on conifers only). Use this tank mix for postemergence control of certain broadleaf weeds including malva and filaree.

VEGETATION MANAGEMENT - NON-CROP AREAS

Product Information

Apply Quali-Pro Prodiamine 4L to soil surfaces for pre-emergence control of many grass and broadleaf weeds in non-crop areas including ornamentals (does not include container or field grown ornamentals) and established perennial and wildflower plantings on or surrounding non-crop areas as directed in **Table 17**. The best weed control occurs when the product is activated in the soil by 0.5 inches of irrigation or rainfall before weed seeds germinate and within 14 days after application.

Table 17. Amount of Quali-Pro Prodiamine 4L to Apply to Non-Crop Areas for Control of Weeds Listed in Table 11.

Site	Application Rate	Timing	Comments/Instructions
Non-crop areas, including ornamentals, on or surrounding managed rights-of-way for transportation, systems and utilities (including roadways, roadsides, railways, and equipment yards); Facilities including substations, tank farms, pumping stations, parking and storage areas, and non-grazed fence rows.	21 - 48 fl oz/acre or 0.5-1.1 fl oz/1,000 sq ft	Before weed seeds germinate	Use higher rate range for longer control. More than one application per year is permitted, but do not apply more than 48 fl oz/acre (1.5 pounds active/acre) per year.

Tank Mixtures for Use in Non-Crop Areas

Tank mix Quali-Pro Prodiamine 4L with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with Quali-Pro Prodiamine 4L are for use only in states where the tank-mix partner(s), application site and intended use pattern are registered.

Follow the label directions of the tank-mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before combining a tank-mix partner in the spray tank, test for compatibility as described on this label. See the **Compatibility Testing** section of this label.

For non-crop areas, tank mix Quali-Pro Prodiamine 4L with Glyphosate, Paraquat, Diuron, Oryzalin, Diquat dibromide, Simazine, Diglycolamine Salt of Dicamba , Glufosinate-ammonium, Isoxaben, Triclopyr, Bromacil, Sulfometuron-methyl, Imazapyr, Tebuthiuron and Chlorsulfuron.

CHEMIGATION INSTRUCTIONS - OVERHEAD SPRINKLER IRRIGATION APPLICATION

1. Apply this product only through an overhead sprinkler irrigation system. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result in non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
3. To avoid injury to foliage, make sure foliage is sufficiently wet before application or adequate irrigation is applied after application.
4. If sprinkler distribution patterns overlap excessively, injury to leatherleaf ferns and other ornamentals can result.
5. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to public water systems unless pesticide label-prescribed safety devices for public water systems are in place.
6. If necessary, a person knowledgeable of the chemigation system and responsible for its operation, or someone under the supervision of the responsible person, shall shut the system down and make necessary adjustments.

Operation Instruction

1. The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely effected.
6. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 20 parts of water and 1 part Quali-Pro Prodiamine 4L and inject this herbicide suspension mixture into the overhead system. Injecting a larger volume of a more

dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.

9. Before injecting Quali-Pro Prodiamine 4L into the system, run the irrigation system long enough to wet the foliage, then inject Quali-Pro Prodiamine 4L suspension mixture in the pesticide supply tank (see Number 8 above) in 1 inch of irrigation water. After the application is complete, continue the irrigation until all residues are washed off the foliage.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: For minor spills, leaks, or other accidental contamination, follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during clean up and disposal of wastes.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING:

Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of container in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (greater than five gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of container in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable Container (greater than 55 gallons): Refillable container. Refill this container with [common chemical name] only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. For final disposal, offer for recycling or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. For final disposal, offer for recycling or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES, and LIMITATIONS OF LIABILITY.**

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences can result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Control Solutions, Inc. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Control Solutions, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Control Solutions, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Control Solutions, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Control Solutions, Inc.'s election, the replacement of product.

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